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OPERATION AND MAINTENANCE (O&M) PLAN TEMPLATE
NATURALLY OCCURRING ASBESTOS RESPONSE ACTIONS AT SCHOOLS

This document is released as guidance, subject to review and revision as necessary; it should not be considered enforceable or regulatory in nature, and does not have the force or effect of law. Mention of trade names or commercial products does not constitute DTSC's endorsement or recommendation.

I. INTRODUCTION

The Department of Toxic Substances Control (DTSC) has prepared this "*Operation and Maintenance (O&M) Plan Template - Naturally Occurring Asbestos Response Actions at Schools*" (NOA O&M Template) as a companion document to DTSC's "*Interim Guidance - Naturally Occurring Asbestos (NOA) at School Sites, revised September 24, 2004*" (NOA Guidance). In response to requests from school districts, DTSC has developed both documents to assist school districts and their consultants in identifying, investigating, mitigating, and maintaining long-term protection for school sites with soils containing NOA. When NOA remains following mitigation, DTSC requires that O&M plans be developed to specify activities needed for long-term protection, thereby preventing future human exposures and health impacts. DTSC recognizes that future NOA-intrusive construction and maintenance activities may be necessary at such school sites. By providing instructions and pre-structured model language, DTSC's NOA O&M Template is designed to standardize, facilitate, and streamline O&M Plan preparation by school districts and their consultants, clarifying expectations for future O&M activities.

II. PROCESS OVERVIEW

In order to qualify for State funds, § 17213.1 and 17213.2 of the California Education Code (CEC) require that new or expanding school sites, utilizing state funds, be evaluated by DTSC to identify the presence of hazardous materials, including NOA. If NOA is found above acceptable concentrations at a proposed school site, the school district may elect not to proceed with school development. However, if the district chooses to proceed with the project, CEC §17213.1 requires that response actions be taken at the school site under DTSC oversight, in accordance with requirements of Health and Safety Code (H&SC), Chapter 6.8 of Division 20, to mitigate threats to human health and the environment. In addition, where school districts elect to conduct NOA mitigation activities at existing schools under DTSC oversight, the NOA O&M Template may be applied to existing schools.

When response actions to mitigate a school site with NOA-containing soils are required by DTSC, the school district and its consultants will prepare a remedy selection document describing the required response actions, and submit it to DTSC for review and approval. This decision document may be either a Removal Action Workplan (RAW) or Remedial Action Plan

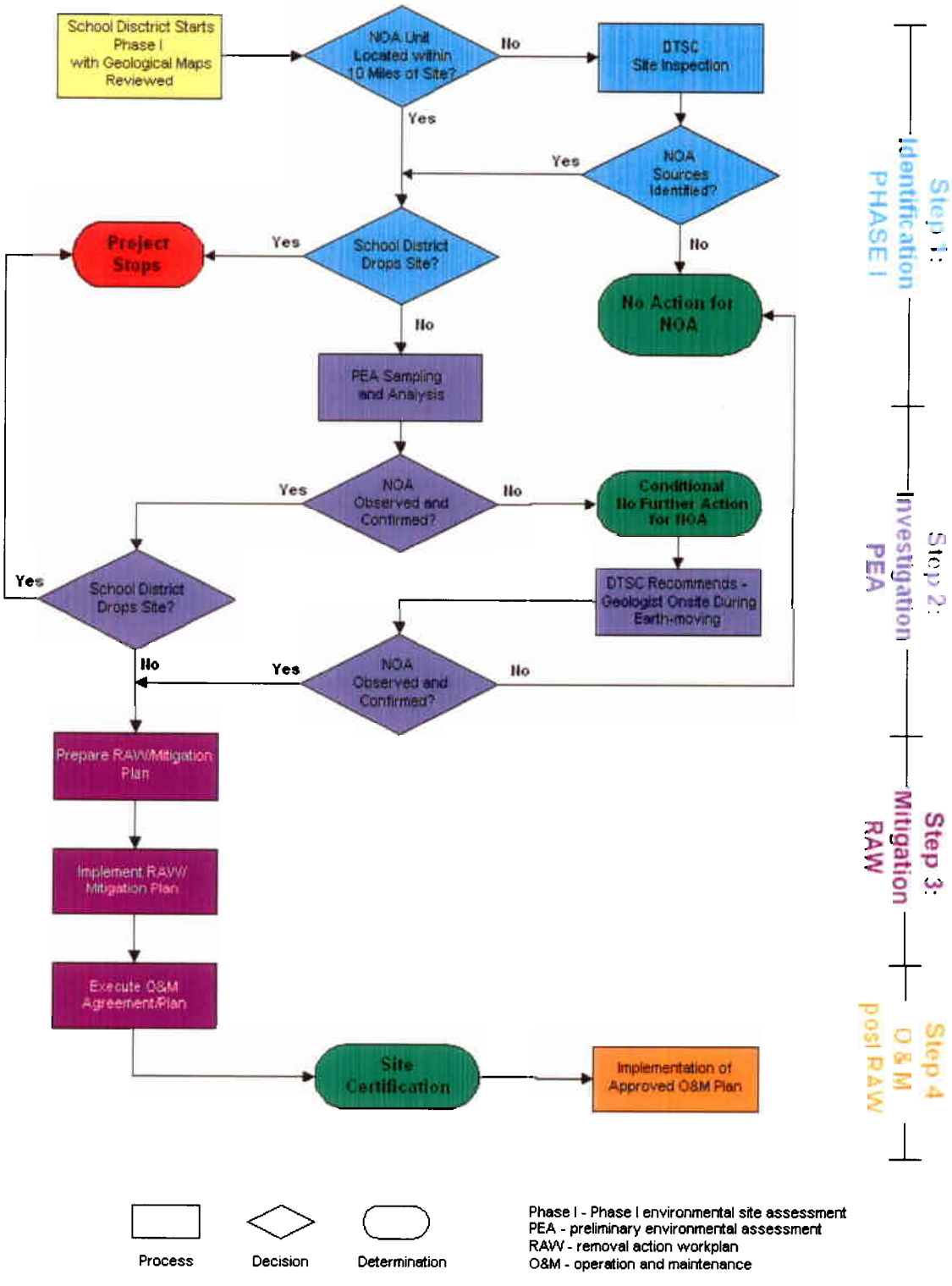
(RAP); however, most response actions at school sites will be pursuant to a RAW. For school sites with soils containing NOA, the remedy most often selected in the RAW will be implementation of engineering controls in the form of "caps" placed over the NOA-containing soils to create barriers to prevent or greatly reduce exposures. Caps may include placement of buildings or other barrier materials including, but not limited to, concrete, asphalt, clean fill, or landscaping.

The selected cap remedies for school sites with NOA-containing soils must be properly implemented, maintained and appropriately repaired so that the barriers will remain intact, and the remedy will remain effective. Therefore, DTSC requires that ongoing, long-term administrative controls be established in an approved O&M Plan and implemented accordingly to protect, monitor, and maintain the engineering controls under normal and/or unforeseen conditions.

When DTSC requires a response action at a school site, the school district and DTSC will enter into an agreement. This may be a School Cleanup Agreement (SCA), prepared by DTSC, which includes O&M provisions requiring the school district to implement necessary O&M activities in accordance with an approved O&M Plan, under DTSC oversight. The agreement references the major elements of the response action, and specifies ongoing requirements for inspections, additional investigations and mitigation (if needed), stop work orders, schedule extensions, cost reimbursement and dispute resolution.

Please refer to attached figure," *Naturally Occurring Asbestos (NOA) Decision Flowchart for School Sites*", which displays decision milestones during the process of NOA identification, investigation, cleanup, and certification of a school site.

NATURALLY OCCURRING ASBESTOS (NOA) DECISION FLOWCHART FOR SCHOOL SITES



III. PREPARATION, REVIEW AND APPROVAL OF O&M PLAN

An O&M Plan should be included as an appendix to the RAW. Concurrent with preparation of the RAW, school districts and their consultants will prepare a draft O&M Plan for review and approval by DTSC. DTSC will review and provide comments on the draft O&M Plan, requesting revisions as needed. In most cases, the draft RAW, with the draft O&M Plan, will be circulated for a thirty-day public comment period. Prior to DTSC's review and approval of the final O&M Plan, school districts will complete implementation of the response action under the RAW, and upon completion of mitigation, will incorporate post-construction information (as-built drawings, etc.) into the final O&M Plan. Final O&M Plans prepared by school districts must be signed by a California-registered professional (usually an engineer or geologist) with expertise in NOA investigation and remediation, as required by the Business and Professions Code, Chapters 7 and 12.5, and the California Code of Regulations (CCR), Title 16, Chapters 5 and 29.

An O&M Plan is a "stand-alone" document which:

- identifies school district personnel who are responsible for ensuring that the remedy remains protective and for periodic notice and status reporting to DTSC
- summarizes site description, including previous environmental investigations, mitigation, and post-construction site conditions
- identifies regulatory requirements and any restrictions or prohibitions on future intrusive activities that may disturb the cap and expose NOA materials
- establishes guidelines and specifies O&M activities needed to ensure the effective operation, monitoring, worker health and safety protection, repair and maintenance of selected cap remedies under both normal and unforeseen conditions
- establishes policies and procedures for worker training, notices, inspections, report preparation, submittals, and record-keeping
- specifies performance requirements for variance, modification and/or termination of O&M activities

III. SITE CERTIFICATION AND IMPLEMENTATION OF O&M PLAN

Prior to occupancy of school buildings, where DTSC has required a response action at a school site, CEC §17213.2(d)(2) states that school districts first obtain DTSC's certification that "...all response actions, except for operation and maintenance activities, have been completed as necessary to ensure that hazardous materials at the school site no longer pose a significant risk to children and adults, and that the response action standards and objectives established in the final removal action work plan or remedial action plan have been met and are being maintained." Where response actions have been required to mitigate NOA-containing soils at school sites, DTSC will issue certification when the four (4) following conditions have been met:

- DTSC has performed a site inspection to ensure that cap remedies are in place, and has determined that response action standards and objectives have been met
- DTSC has approved the RAW Completion Report, including detailed as-built mitigation plans, drawings and certifications
- DTSC has approved the final O&M Plan
- DTSC and the school district have signed an agreement requiring long-term O&M

DTSC recognizes that some schools may open prior to completion of all construction and landscaping activities. In such circumstances, DTSC will work with school districts on a case-by-case basis regarding final certification. The final O&M Plan, as modified and/or approved by DTSC, will become effective upon completion of mitigation and should remain in effect until DTSC has released the school district in writing from the required O&M Plan, pursuant to termination procedures specified in the O&M Plan.

IV. NOA O&M PLAN TEMPLATE FOR NOA RESPONSE ACTIONS AT SCHOOLS

The NOA O&M Plan Template includes a sample Table of Contents, followed by summary instructions and model language for each topic in the Table of Contents. The "Instructions", noted in italics within framed text boxes, provides a brief description of information recommended by DTSC for inclusion in the sections for each topic. Model language follows each set of instructions in order to illustrate DTSC's recommended level of detail. Additions or modifications should be made as appropriate to address specific site/remedy conditions. Summary information, such as site description and engineering controls, may be transferred into the O&M Plan from earlier documents, such as the Preliminary Environmental Assessment (PEA) and/or RAW, and will not require "re-inventing the wheel". The NOA O&M Plan Template also includes a list of recommended figures, tables, and appendices. Model appendix documents include: Inspection Checklist for NOA Cap Remedies; Standard Operating Procedure (SOP) outline; a Matrix for O&M Personnel Roles and Responsibilities; Regulatory Requirements for Health and Safety Training; and outlines for Completion Reports, Annual Summary Inspection Reports, and Five Year Reviews.

DTSC intends usage of this standardized approach to promote more efficient document preparation by school districts and their consultants, lessening the need for multiple document iterations and revisions, with subsequent reduction of DTSC review time and oversight fees.

TEMPLATE

OPERATION AND MAINTENANCE PLAN FOR NOA RESPONSE ACTIONS AT SCHOOLS

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FIGURES (Examples Not Included in Template)

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APPENDICES

1.0 OPERATIONS & MAINTENANCE OVERVIEW

1.1 Introduction

Instructions: Provide general statement of document purpose, name of the school district and the school site, effective date of the document, DTSC authority to oversee the school site, and general prohibition of NOA intrusive activities unless conducted in accordance with provisions of the O&M Plan.

This Operations and Maintenance (O&M) Plan has been prepared by the [name of the school district] (school district) for the cap remedy installed at [name of school] (school site) in [name of city and county]; see Figure 1 (Site Plan Map) and Appendix A (Legal Description and Assessor's Parcel Map). The O&M Plan presents the policies and procedures of the school district for long-term operation, maintenance and monitoring of engineering controls and management of soils containing naturally occurring asbestos (NOA) for the school site.

Unacceptable concentrations of NOA were identified in soils at the school site. As a result, engineering controls in the form of caps were placed over the NOA soils to create barriers, preventing or greatly reducing exposures. Long-term remedy O&M activities are required to monitor and protect the caps. Accordingly, the school district and DTSC have entered into an Agreement which requires the school district to complete cleanup activities and to implement an O&M Plan under DTSC oversight. NOA intrusive activities, as defined in Section 7, are prohibited at the school site unless conducted in accordance with applicable provisions of the O&M Plan.

The O&M Plan will be implemented upon completion of mitigation. Response actions and long-term O&M activities will continue to be conducted under DTSC oversight, as required under the California Education Code (CEC), §17213.1 and §17213.2, and Health and Safety Code (H&SC), Division 20, Chapter 6.8, commencing with § 25300 et. seq. The final O&M Plan, as modified and/or approved by DTSC, will remain in effect until DTSC has released the school district in writing from the required O&M Plan, as specified in Section 10.3.

1.2 O&M Plan Goal and Objectives

Instructions: State goal and provide general objectives of the O&M Plan, including protecting public health, maintaining the engineering controls, and ensuring remedy effectiveness.

The primary goal of the O&M Plan is to prevent uncontrolled NOA exposures and to protect the health of students, faculty, staff, O&M personnel, and visitors at the school site. In order to accomplish this goal, the O&M Plan will address the following objectives:

- to minimize disturbances of NOA-containing soils
- to describe the mitigation remedy, including installed cap systems
- to establish an inspection and monitoring program to identify areas of exposed NOA-containing soils or damaged cap systems, and evaluate ongoing remedy effectiveness
- to provide for timely repair or replacement needed to restore damaged cap systems
- to train O&M inspectors, and other staff as needed, in personal health and safety protection and proper methods of inspection and repair of cap systems

- to provide for record-keeping of inspections and repairs, and reporting to DTSC
- to make O&M Plan available for public review, with copies maintained at the school site and the school district office

1.3 Naturally-Occurring Asbestos (NOA) Hazard Summary

Instructions: Provide a general summary of NOA hazardous health effects

Asbestos is the common name for a series of naturally-occurring iron-magnesium-silicate minerals. Six asbestos minerals are currently referenced in state regulations; see Title 22 California Code of Regulations (CCR), § 66261.24(a)(2) and Appendix X to Chapter 11, Title 22, Division 4.5, CCR. These six minerals are classified in two different groups based on their fiber characteristics: a) chrysotile belongs to the "serpentine" mineral group; b) the remaining regulated asbestos minerals (amosite, crocidolite, actinolite, anthophyllite and tremolite) belong to the "amphibole" mineral group. All regulated forms of asbestos are considered hazardous, and classified as known human carcinogens by state, federal, and international agencies. As defined in H&SC §25316 and §25260 respectively, asbestos is both a hazardous substance and a hazardous material.

Human health effects of asbestos are dependent primarily upon exposure to airborne asbestos fibers, which can be inhaled deeply into lungs. Exposure to asbestos through inhalation can result in health impacts, including respiratory disease (asbestosis, a non–cancerous fibrosis of the lungs) and lung cancer (mesothelioma, cancer of the lung lining). Breathing of asbestos dust has been related to scarring of lung tissue (asbestosis). In addition, asbestos and tobacco smoke have a strong interactive synergism, which can produce even higher incidences of lung cancer. The longer a person is exposed to asbestos, and the greater the intensity of exposure, the greater the chances for development of health problems.

1.4 O&M Personnel Roles and Responsibilities

Instructions: Identify the names, contact information (e.g., address, telephone and fax numbers, e-mail address), roles and responsibilities of key O&M personnel associated with implementation of O&M activities. Assign appropriate responsibilities in a table or matrix format for specific O&M duties (Appendix B). Attach a resume with professional qualifications of O&M Professional (Appendix C). Specify all persons responsible for contacting DTSC for routine reporting or in the case of unforeseen occurrences. Specify any other delegated O&M personnel with additional roles and responsibilities as necessary. Specify responsibility to notify DTSC within 14 days of changes in designated personnel

The school district will employ and designate the following key O&M personnel associated with implementation of the O&M Plan at the school site: NOA Coordinator; O&M Professional; and School Site Designee. The school district will retain a qualified professional to conduct inspection training and a Competent Person (see Sections 4.2 and 7.4) to conduct asbestos awareness training. When necessary, the school district will employ qualified contractors who will follow the Standard Operating Procedure (SOP) or a DTSC-approved revised SOP (as described in Section 7.3) to perform NOA intrusive work impacting the installed cap systems at the school site. Please see Appendix B, Matrix identifying O&M personnel roles and responsibilities. The school district will notify DTSC within 14 days of any changes in the names, addresses, or telephone numbers for the key O&M personnel.

1.4.1 NOA Coordinator

[NOA Coordinator Name
Title
School District Name
Address
Telephone Number (Desk and Cellular)
Facsimile Number
E-Mail Address]

The responsibilities of the NOA Coordinator are to:

- implement the O&M Plan
- be familiar with site conditions and cap systems installed at the school site
- evaluate work orders to determine if work will be NOA-intrusive
- oversee implementation of a DTSC-approved SOP for NOA-intrusive work
- receive and submit all notices, comments, documents, reports, approvals, decisions and other communications to and from DTSC on behalf of the school district for the school site
- identify and oversee provision of inspection training and asbestos awareness training
- accompany O&M Professional during annual inspections
- submit O&M Plan and all subsequent reports, including Annual Inspection Summary Reports, Five Year Review Reports, and NOA Intrusive Work Completion/Incident Reports
- ensure that issues pertaining to O&M are brought to the attention of the School District's Board as appropriate, including requests for ongoing appropriations of funds and notification in the event that any exposures of NOA occur at the school site

1.4.2 O&M Professional

[O&M Professional Consultant's Name
Title with state license #
Company Name
Address
Telephone Number (Desk and Cellular)
Facsimile Number
E-Mail Address]

Pursuant to Business and Professions Code, Chapters 7 and 12.5, and the California Code of Regulations, Title 16, Chapters 5 and 29, the O&M Professional is a California-registered professional with expertise in NOA investigation and remediation, e.g., engineer or geologist, who is familiar with the cap systems installed at the school site. The O&M Professional has additional expertise and experience with slope stability [If applicable]. To demonstrate expertise in NOA investigation and remediation, the resume of the O&M Professional, and the statement of qualifications of the consulting firm responsible for his/her work are included as Appendix C.

The responsibilities of the O&M Professional are to:

- conduct annual inspections (including five-year reviews)
- prepare and sign Annual Inspection Summary Reports and Five-Year Review Reports
- other environmental professional work related to NOA matters at the school site

1.4.3 School Site Designee(s)

[School Site Designee(s) Name(s)
School Name
Address
Telephone Number (Desk and Cellular)
Facsimile Number
E-Mail Address]

The responsibilities of the School Site Designee(s) are to:

- ensure that all school staff with O&M roles have received appropriate training and direction
- ensure that activities which may potentially disturb NOA-containing soils will not be conducted at the school site without the knowledge and approval of the NOA Coordinator
- provide as necessary information to staff and parents concerning any releases of NOA at the school site

1.5 O&M Cost Estimate

Instructions: Prepare an initial estimate of annual O&M costs for implementation of the approved O&M Plan, to include but not be limited to, training costs, consultant costs, DTSC oversight costs, and school O&M staff costs, in current dollars. Note: Routine DTSC oversight is currently estimated at 10 to 15 hours annually. Additionally, prepare an estimate of projected costs for routine or potential repairs and maintenance.

O&M care begins upon completion of remedy installation and, for the purpose of cost estimating, may continue for at least 30 years after that date. The routine annual O&M costs are estimated in current dollars in Table 1 below:

TABLE 1

Annual O&M Cost Estimate

Item	Hours	Hourly Rate	Annual Cost
Training	X hours/year	$X/hour	$
Scheduled Inspections (by school staff)	X hours/year	$X/hour	$
Annual Inspection (by consultant)	X hours/year	$X/hour	$
Report Preparation (by consultant)	X hours/year	$X/hour	$
DTSC Oversight	X hours/year	$X/hour	$
Projected Costs (periodic repairs and maintenance)			$
Total Annual O&M Cost Estimate			**$**

2.0 SITE DESCRIPTION

Instructions: Describe the location, size, Assessor's Parcel Number, latitude and longitude, ownership and physical setting of the school site and give the relationship to public boundaries such as state, county, and city. Identify street/highways, city, county and current property owner. Describe the general site geology and topography. Describe prior site usage; see Phase I Environmental Site Assessment and/or Preliminary Environmental Assessment (PEA) for information.

[Describe school site as appropriate] e.g., The school site, totaling approximately [XX acres], is described in Appendix A, Legal Description and Assessor's Parcel Map at a latitude of X and a longitude of X. The school site is identified as County Assessor's Parcel No. [XXX-XX-XXX], and is located in the area generally bounded by [name of street, names of cross-streets] in [name of city], [name of county] (see Figure 1). The [specify name of school district, city, or other] is the current property owner.

[Describe site geology as appropriate] e.g.,The school site is located on the northern-most extension of a bedrock ridge that rises above the relatively flat, alluvial plain of the X valley. Prior its development as a school, the site generally sloped upward from the school site perimeter to the top of the hill located near the center of the school site. Previous grades ranged from approximately X feet above mean sea level (*msl*) in the northeast corner of the school site, up to approximately X feet above *msl* at the top of the hill.

[Describe prior land usage of the site as appropriate;] e.g., Prior usage of the site was as grazing land for cattle.

2.1 Previous Site Investigations and Mitigation

Instructions: Briefly give a chronology and summarize the regulatory history of the school site, including environmental assessments, investigations, remedial/removal actions, regulatory actions, orders, etc. Identify presence of NOA areas, sampling results and concentrations of all contaminants of concern. Provide appropriate reference figures, including copies of the NOA sampling location map with posted NOA data (from PEA) and the map showing mitigation areas (from RAW). Summarize mitigation measures taken. Cite applicable laws and regulations.

[Provide site-specific summary] e.g., Pursuant to the requirements of CEC §17213.1, the school district conducted a Phase I Environmental Site Assessment (Phase I) on [date of Phase I Report] and a Preliminary Environmental Assessment (PEA) of the school site under DTSC's oversight on [date of PEA Report]. A review of geological maps for the school site revealed that the school site is underlain by serpentinite and ultramafic rock formations, often seen as parent rock for NOA. The bedrock ridge comprising the school site is composed of Jurassic- to Cretaceous-aged Franciscan Complex rocks, consisting mostly of serpentinite. Bedrock is exposed at the ground surface at the school site. Visual observation of surface rock at the surface at the school site confirmed the presence of ultramafic rock.

During the PEA, a total of [number] soil samples were collected at various depths [specify appropriately] and analyzed for asbestos by California Air Resources Board (CARB) Method 435 Polarized Light Microscopy (PLM) in asbestos point counting (among 400 total points).

Chrysotile asbestos was detected in [number] collected samples, ranging from [specify concentrations, e.g., 0.25 to 6.25 percent (%) by structure], which exceeded DTSC's interim action level of 0.25% by structure. A copy of the NOA sampling location map with NOA data is included as Figure 2.

Based on the PEA results, NOA (as chrysotile) was identified as a component of serpentine bedrock materials that underlie the school site along with overlying soils. The finding confirmed that the school site posed a potential threat to human health and the environment. As a result, DTSC determined on [date of DTSC's PEA determination letter] that further action was required at the school site to mitigate the potential hazard posed by the presence of soils containing NOA before the school site could be developed as a school.

Pursuant to the requirements of CEC, §17213.1, and H&SC, Chapter 6.8 of Division 20, the school district conducted mitigation activities for the school site in accordance with a Removal Action Workplan (RAW) approved by DTSC on [date]. Prior to its approval, DTSC circulated the draft RAW for public review and comment during a thirty-day period. As part of the approval process for the RAW, DTSC prepared a Notice of Exemption (NOE) pursuant to the California Environmental Quality Act (CEQA), Public Resources Code §21000 et. seq.

Between [inclusive dates], the school district conducted mitigation activities in accordance with the approved RAW, under DTSC's oversight, concurrently with school construction. Mitigation activities at the school site included excavation of [number cubic yards or tons of soil] from the existing hill; grading; offsite disposal of approximately [number cubic yards] of native NOA-containing soil and rock, and capping of the exposed portions of the school site with [number cubic yards] of imported clean fill material (cap) to prevent future exposure to NOA. A copy of the site plan map from the RAW showing areas covered by cap systems is included as Figure 3. Because unacceptable concentrations of NOA remain in the soils below the cap on the school site, the selected cap remedy requires O&M activities to ensure long-term protection of human health.

2.2 Post-Mitigation Site Conditions

Instructions: Provide available information and a brief description of post-mitigation site conditions. Include a site plan map, showing areas where mitigation has occurred.

The school district has developed the school site as a new [elementary, middle or high] school, including [number] classrooms, [number] administration and other buildings, [number] associated parking areas, [number] playground areas and [number] athletic fields. A copy of the current site plan map, showing all onsite buildings and mitigation areas, is included as Figure 3.

3.0 SUMMARY OF ENGINEERING CONTROLS - SELECTED CAP REMEDIES

Instructions: Provide a summary of the NOA cap remedies, including the type of surfaces and materials, areal extent and the thickness of covers used. Include maps depicting all buildings, utility line trenches, finished grade elevations, and thickness of clean fill soils throughout the school site. Describe all cap systems, such as hardscape and landscape systems, or other cap systems where applicable. Summarize actual onsite engineering specifications from the RAW for each of the identified cap systems. Provide 2 different scale site figures: a) 11"x17"; b) "D" size ~30"x 40" (see Figure 4. Provide cross-section figures and as-built drawings illustrating cap design and construction (Figure 5 and Appendix D – As-Built Drawings and Specifications). Provide a site survey showing final elevations following grading and compaction.

For the school site with soils containing NOA, the remedy selected in the RAW was the implementation of engineering controls in the form of "caps" placed over the NOA soils to create barriers to prevent or greatly reduce exposures. Caps include placement of buildings or other barrier materials including, but not limited to, concrete, asphalt, clean fill, or landscaping. Hardscape and landscape engineering cap systems are in use at the school site, as described in sections 3.1 and 3.2 below. A complete set of as-built drawings and specifications, including cross-section maps illustrating cap design and construction, is included as Appendix D. See also Figures 3, 4, and 5 for Site Plan Map, Site Survey with Elevations, and Cross Sections – Cap Designs.

3.1 Hardscape Cap Systems

Hardscape cap systems, as identified in the RAW, emplaced across this school site, are: [describe hardscape cap systems] e.g., building foundations, hard-court surfaces, artificially covered playing surfaces (e.g., Astroturf®), paved parking lots, traffic aisles and fire lanes, bus lanes, and sidewalks. Hardscape cap systems consist of multiple layers of differing materials but do not include geotextiles/markers.

- **Building Foundations**: X inches of concrete over X inches of sand over X inches of gravel (for a total thickness of X inches)
- **Hard-Court Pavement**: X inches of asphaltic concrete over X inches of compact gravel aggregate (for a total thickness of X inches)
- **Parking Stall Paving**: X inches of asphaltic concrete over X inches of compact gravel aggregate base (for a total cap thickness of X inches)
- **Traffic Aisle and Fire Lane Paving**: X inches of asphaltic concrete over X to X inches of compact gravel aggregate base (for a total cap thickness of X to X inches)
- **Bus Lane Paving**: X inches of asphaltic concrete over X inches of compact gravel aggregate base (for a total cap thickness of X inches)
- **Sidewalks**: X inches of rebar reinforced concrete over X inches of compact clean soil (for a total cap thickness of X inches)

- **Track**: approximately X inch of polyurethane/rubber surface over X inches of asphaltic concrete over X inches of aggregate base (for a total cap thickness of X inches)

- **Tennis Courts**: X inch of court surfacing material over X inches of rubberized-asphaltic system over X inches of compact gravel aggregate (for a total cap thickness of X inches)

3.2 Landscape Systems

Landscape cap systems, as identified in the RAW for the school site, are: [describe landscape cap systems] e.g., natural covers (soil or grass) in specified areas. Landscaping may be placed over a geotextile/ marker, to reduce potential exposure to NOA soil. The landscape cap systems are further classified for high activity use, low activity use, and steep sloped areas:

- **High Activity Areas**: High activity areas, as identified in the RAW for the school site are: [describe high activity areas] e.g., the grass football field, soccer fields, dirt softball infields, dirt portions of baseball fields, and playground apparatus areas. High activity areas have a geotextile/marker covered by X inches of clean-fill and X inches of sod (for a total cap thickness of X inches). High activity areas will be properly maintained, i.e., periodically replenished with additional clean fill and sod, to ensure the geotextile/marker is adequately covered.

- **Low Activity Areas**: Low activity areas, as identified in the RAW for the school site, are: [describe low activity areas; note if geotextile/ marker is present, specify cap thickness] e.g., planters; grass areas between buildings. In the event that dirt pathways are formed as a result of student foot traffic on the low activity grass areas, a hardscape walkway will be installed to ensure NOA soils are not exposed. Low activity areas will be properly maintained, i.e., periodically replenished with additional landscaping or clean fill as necessary.

- **Steep Sloped Areas**: Steep slopes, as described in the RAW for the school site, are: [describe steep sloped areas] e.g., The school site has three steep-sloped areas, that is, having a gradient of greater than two (2) Vertical to one (1) Horizontal, which require routine inspection and maintenance. Additional inspection will be necessary to ensure that caps over soil on slopes are maintained, and to identify rivulets and heavy erosion during strong precipitation events. To reduce the potential for erosion, lined brow ditches are used on one of the sloped areas; this area is covered with rolled jute mat and native grasses. The second sloped area is not as steep [describe gradient], and is also covered with rolled mat/jute mat with native grasses and shrubs. The third slope [describe gradient] is covered using a spray-on concrete surface.

TABLE 2

Summary of NOA Cap Systems

Area	Activity Level	Material	Extent (acres)	Geotextile/ Marker	Thickness (inches)
Hardscape Area A (Parking lot)	-	Asphalt	#	No	#
Hardscape Area B (Walkway)	-	Concrete	#	No	#
Hardscape Area C (Football field)	-	Artificial turf	#	No	#
Hardscape Area D (Track)	-	Rubber	#	No	#
Landscape Area E (Soccer fields)	High	Clean-fill, Sod/Grass	#	Yes	#
Landscape Area F (Baseball and softball outfields)	Low	Clean-fill, Sod/Grass	#	Yes	#
Landscape Area G (Softball in-field)	High	Clean-fill	#	Yes	#
Landscape Area H (Steep Slope)	Low	Rolled Jute Mat, Grass	#	No	#
Landscape Area I (Planter adjacent to Buildings)	Low	Clean-fill	#	No	#

Areas A, B, C, D, E, F, G, H & I are also shown on Figure 3, Map of Areas with Cap Systems.

4.0 TRAINING

Instructions: Describe training program for school O&M staff, specifying requirements for asbestos awareness training and O&M inspections.

4.1 Asbestos Awareness Training Requirements

Instructions: Identify classifications of staff who will receive training, frequency of trainings, training subjects, trainer qualifications, and record-keeping requirements. At present, there is no established curriculum for NOA training; therefore, design training to meet requirements of state Occupational Safety and Health Administration (CalOSHA, California Code of Regulations, Title 8, Subchapter 4, § 1529) and with parallel requirements to the Asbestos Hazard Emergency Response Act (AHERA – Title 40, Code of Federal Regulations, Part 763, Subpart E) [Note: AHERA was enacted in 1986 to ensure that school districts safely managed asbestos-containing materials (ACM) found in schools.] See Appendix E for regulatory references.

Asbestos awareness training is recommended for all school district maintenance and custodial staff (custodians, electricians, heating/air conditioning engineers, plumbers, etc.) who may come into contact with NOA-containing soils at the school site. In accordance with California Code of Regulations (CCR), Title 8, Subchapter 4, *Construction Safety Orders*, § 1529(k)(9)(g), persons who may at any time be exposed to concentrations greater than the permissible exposure limit (PEL) of 0.1 fibers per cubic centimeter (in 8 hours) for asbestos must attend asbestos awareness training within sixty (60) days of hire, and must also attend annual refresher training.

The asbestos work class definitions and training requirements specified in Title 8 CCR, §1529 (b) and 1529(k) refer primarily to "asbestos" or "asbestos containing materials (ACM)" and do not specifically address NOA; however, asbestos awareness training for NOA O&M activities will be consistent, i.e., work-equivalent, with these standards. See Appendix E for regulatory references.

Training provided to O&M employees will be commensurate with the work class and shall include, but not be limited to, the following subjects: methods of recognizing NOA; school site NOA locations; health effects associated with asbestos exposure, etc. Upon completion of training, O&M employees should have familiarity with appropriate hazard controls and work practices to avoid disturbing NOA and prevent NOA exposures (such as use of wet methods for dust suppression; protective clothing; dust or asbestos monitors; respirators; proper cleanup and disposal; decontamination of equipment and clothing; relationship between smoking, asbestos, and cancer).

4.2 Asbestos Awareness Trainer Requirements

Instructions: Identify requirement for a "Competent Person" to meet training standards and carry out training requirements as described in § 1529 (b) and (k).

The school district will designate a Competent Person (§1529[b]) to carry out training requirements as described in § 1529 (b) and (k) for O&M personnel. A "Competent Person" is one who:

- is capable of identifying existing and predictable conditions in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees
- is also capable of identifying existing asbestos hazards in the workplace, and selecting the appropriate control strategy for asbestos exposure
- has authority to take prompt corrective measures to eliminate such identified hazards

The Competent Person may be an asbestos consultant, safety officer or technician familiar with sampling techniques and potentially asbestiform mineral formations; the Competent Person may utilize the assistance of the O&M Professional or other trained professionals as appropriate.

4.3 Asbestos O&M Inspection Training

Instructions: Identify trainer (and qualifications if not earlier specified), training subjects, classifications of staff who will receive training, frequency of trainings, and record-keeping requirements. Specify school district personnel responsible to oversee training and record-keeping. Specify purpose of training, that is, to ensure that school district personnel who will conduct O&M inspections are familiar with locations of all engineering control systems (caps and their component materials, and are able to identify eroded or damaged engineering controls (caps); document findings on the inspection checklist; and appropriately document completion of maintenance and repair work. In addition, training should ensure that school district staff who will conduct NOA-intrusive work activities are familiar with and will follow requirements of the Standard Operating Procedure (SOP), with other pertinent rules and regulations as applicable; see Appendices E, F, and G.

A designated professional will conduct NOA Inspection training. The curriculum for NOA Inspection training will include, but not be limited to, the following subjects: overview of O&M Plan; descriptions and locations of onsite mitigation measures/engineering controls; required inspection locations; recognition of deteriorated, eroded or damaged engineering controls; inspection checklist completion; standard operating procedure (SOP) (see Appendix G); outlines policies and procedures for intrusive O&M work (see Appendices G and H), maintenance and repairs, documentation of repairs; roles and responsibilities of O&M personnel; contact list of responsible persons.

New maintenance staff employees assigned to the school site will attend NOA inspection training prior to performing inspections at the school site. Training for designated maintenance staff will meet applicable requirements of 40 Code of Federal Regulations (CFR) 763.92(a)(1) [see Appendix E, 40 CFR Training Requirements for Asbestos Containing Materials in Schools] and 8 California Code of Regulations (CCR) § 1529(k)(9)(G), Training Requirements for Asbestos in Construction (see Appendix E).

5.0 O&M INSPECTIONS

5.1 Periodic Inspections

Instructions: State frequency with which periodic inspections of engineering controls will be scheduled and conducted by school district personnel to ensure that the engineering controls (caps) remain intact and that no soil erosion or other material degradation has occurred which might result in NOA exposures. DTSC recommends monthly inspections for the first year to

identify potential use impacts or trends; varying inspection frequencies may be appropriate for specified areas on the school site. Frequency of inspections may be modified on an annual basis, based on specific site conditions. Describe all inspection and maintenance tasks, and specify the inspection and maintenance schedules required for the proper care and efficient operation to maintain the effectiveness of each of the cap systems. Refer to Appendix F, Inspection Checklist.

Periodic inspections of the engineering controls will be conducted [specify whether monthly, bi-monthly, or quarterly] and will be performed by school district maintenance staff under the direction of the NOA Coordinator and O&M Professional (Consultant). To ensure that no control measures are overlooked, a checklist for the specific control measures and their locations must be completed for each inspection. Upon completion, the checklists will be reviewed and signed by the NOA Coordinator (see Appendix F, Inspection Checklist for NOA Mitigation Measure Areas).

School district employees who are assigned to conduct O&M inspections will be responsible for Identification of any required repairs, and documentation of changes in site conditions or usage, descriptions of any onsite construction activities, or any other significant information relating to effectiveness of the NOA engineering controls. Examples of such conditions include cracks in caps or sloped areas, soil movement, rivulets, run-on or run-off, worn grass areas, visible geotextile/markers, visible bare soils containing NOA.

Periodic inspection reports will be maintained onsite at the school site, and in the school district administrative files. All inspection records will be available for DTSC and public review. School district employees who conduct periodic inspections will take photographs during each inspection for documentation as appropriate to demonstrate stability and/or failure of engineering controls.

The NOA Coordinator will be responsible for follow-up review to ensure that identified repairs are completed on schedule, and will sign-off in the completion blocks of the inspection reports. Copies of periodic inspection reports will be included in the Annual Inspection Summary Reports and Five Year Reviews submitted to DTSC.

5.2 Inspections for Unplanned Events

Instructions: State nature of unplanned events that will trigger inspections, and describe procedures to be followed, including Inspection Checklist; see Appendix F. Specify that NOA Coordinator will notify DTSC of any failure of the engineering controls that is not repaired within 14 days of discovery, following SOP; notifications should include a proposed schedule for completion of required repairs and maintenance. Specify requirement to document any repairs or maintenance in the Annual Inspection Summary Report.

School district employees will also conduct inspections of engineering controls and steep sloped areas during or immediately following unplanned events, such as fires, broken utility lines, floods and/or heavy rain, seismic events, etc., where caps may be compromised and NOA soils may be exposed. "Heavy" rain (e.g., rainfall may be defined as exceeding 0.46 inches in one hour in the Sacramento region [use site-specific regional averages]). "Significant" seismic events may include those earthquakes occurring nearby, of a magnitude exceeding 5.0 on the Richter scale.

The NOA Coordinator will document all inspections and required repairs or maintenance, and incorporate such documents into the Annual Inspection Summary Report.

The NOA Coordinator will notify DTSC of any failures, i.e., compromised integrity or possible NOA exposures, of the engineering controls resulting from unplanned events that are not repaired, following the SOP, within 14 days of discovery; such notifications will include a proposed schedule for completion of required repairs and maintenance.

5.3 Annual Inspections

Instructions: Specify that the NOA Coordinator will notify DTSC at least 14 days in advance of each annual inspection in case DTSC elects to participate in the inspection. Inspect all components of the installed cap remedy annually. Specify that annual inspections will be conducted by qualified O&M personnel, under the direction and supervision of the O&M Professional. Discuss need to include measurement and evaluation of the amount of clean fill cover remaining over geotextiles/markers overlying NOA-containing soils. Specify requirement to notify DTSC of any failure of the engineering controls that is not repaired within 14 days of discovery; notifications should include a proposed schedule for completion of required repairs and maintenance. Specify that the Annual Inspection Summary Report will be submitted to DTSC within 30 days after completion of inspection, in accordance with reporting and notice requirements specified in Sections 8.2 and 8.5.1.

The NOA Coordinator will notify DTSC at least 14 days in advance of each annual inspection. The first annual inspection will be completed by [date], and all subsequent annual inspections will be completed by the [month and day] of every year.

All NOA engineering controls will be inspected annually by the O&M Professional with experience in evaluating cover systems, and, when appropriate, slope stability issues. The NOA Coordinator may accompany the O&M Professional during the annual inspection. The purpose of this inspection is to identify and review completion of any required repairs, changes in site conditions or usage, descriptions of any onsite construction activities, or any other significant information relating to the NOA engineering controls that may have taken place over the previous twelve months. All annual inspections will include measurement and evaluation of the amounts of clean fill cover remaining over geotextiles/markers overlying NOA-containing soils.

During inspections, all items flagged for required maintenance will have a specified action date for completion of required repairs. The NOA Coordinator is responsible for follow-up review to ensure that identified repairs are completed on schedule, and will sign-off in the completion blocks of the inspection reports. The NOA Coordinator will notify DTSC of any failures of the engineering controls that are not repaired following the SOP within 14 days of discovery; such notifications will include a proposed schedule for completion of required repairs and maintenance.

The Annual Inspection Summary Report will be submitted to DTSC for review and approval within 60 days after completion of each annual inspection, in accordance with reporting and notice requirements specified in Sections 8.2 and 8.5.1

6.0 FIVE-YEAR REVIEW

Instructions: Discuss five-year reviews of remedy effectiveness when hazardous substances remain in place. Identify the purpose of the five-year reviews. Specify that the O&M Professional should conduct a summary review and prepare a report of the completed response actions no less often than once every 5 years after DTSC issuance of site certification, as provided in Education Code § 17213.2(d)(2). Specify the requirement to notify DTSC at least 14 days in advance of each Five-Year inspection. Identify the requirement for the school district to perform additional NOA investigation, monitoring, and/or mitigation in consultation with DTSC based upon the findings of each Five-Year Review report. Specify that O&M Professional should sign each Five-Year Review report. Specify that the Five-Year Review Report will be submitted to DTSC within 30 days after completion of inspection, in accordance with reporting requirements specified in Section 8.4.

Five-Year Reviews will be conducted to evaluate ongoing remedy effectiveness where hazardous materials, such as NOA, remain in place. The purpose of five-year reviews is to determine whether the remedy: a) remains protective of human health and the environment; b) is functioning as designed; and c) is maintained appropriately by O&M activities. Each Five-Year Review will be conducted by the O&M Professional, who will prepare and sign the Five Year Review report, following the outline in Appendix K to summarize his/her findings and conclusions.

The NOA Coordinator will notify DTSC at least 14 days in advance of each Five-Year Review inspection. The first Five-Year Review inspection will be completed by [date], and all subsequent annual inspections will be completed by the [month and day] of every fifth year.

All NOA engineering controls will be inspected by the O&M Professional in the same manner as in the annual inspection; see Section 5.3 above. The purpose of the fifth year inspection is to identify and review completion of any required repairs, changes in site conditions or usage, descriptions of any onsite construction activities, or any other significant information relating to the NOA engineering controls that may have taken place over the previous five years. All fifth-year inspections will include measurement and evaluation of the amounts of clean fill cover remaining over geotextiles/markers overlying NOA-containing soils.

During inspections, all items flagged for required maintenance will have a specified action date for completion of required repairs. The NOA Coordinator is responsible for follow-up review to ensure that identified repairs are completed on schedule, and will sign-off in the completion blocks of the inspection reports. The NOA Coordinator will notify DTSC of any failure of the engineering controls that is not repaired following the SOP within 14 days of discovery; such notifications will include a proposed schedule for completion of required repairs and maintenance.

The Five-Year Review Report will be submitted to DTSC for review and approval within 60 days after completion of each fifth-year inspection, in accordance with reporting requirements specified in Section 8.4. The District will perform additional NOA investigation, monitoring, and/or mitigation as required by DTSC based upon the findings of each Five-Year Review report.

7.0 INTRUSIVE WORK ACTIVITIES

Instructions: Specify prohibitions limiting NOA intrusive work unless conducted in accordance with DTSC-approved O&M Plan. Address construction and maintenance work in two categories: Non-NOA intrusive work and NOA intrusive work. Define NOA intrusive work. Identify the NOA Coordinator as being responsible for reviewing work order requests to determine if NOA-soils will be disturbed, and notifying DTSC as appropriate prior to performance of intrusive work at the school site.

O&M personnel will submit all school site construction and maintenance work order requests to the NOA Coordinator. The NOA Coordinator will evaluate in writing whether or not activities described in the work orders are considered "non-NOA intrusive" or "NOA intrusive". "NOA intrusive" activities are prohibited at the school site unless conducted in accordance with applicable provisions of the O&M Plan. "NOA intrusive" work includes any construction or maintenance work activities that disturb NOA-containing soils, including but not limited to: digging, drilling, excavating, grading, repairing, removing, trenching, filling, gardening, and other soil movement that may penetrate or otherwise compromise the caps in place, thereby opening pathways for possible human exposures to NOA. If work is determined to be NOA intrusive, the NOA Coordinator will ensure that work practices are followed as specified in Sections 7.2, 7.3, and 7.4 of the O&M Plan. The NOA Coordinator will provide advance notice of scheduled work to DTSC in accordance with provisions in Section 8.5 of the O&M Plan.

7.1 Non-NOA Intrusive Work

Instructions: Define "Non-NOA intrusive work" to include construction, repairs, and/or maintenance activities at the school site where exposure of NOA-containing soils is not anticipated and where the integrity of engineered controls, such as hardscaped or landscaped caps, is not compromised. Include in this definition any work where the geotextile/marker, if present, will not be penetrated or breached, even though work may be performed in upper layers of a cap system, e.g., clean fill. Specify that the school district does not need to notify DTSC for Non-NOA intrusive work. Identify need for contractor and O&M personnel awareness of NOA-containing soils and cap systems, inspections to ensure cap protection, and guidelines for procedures to be followed if cap systems are breached or NOA releases occur.

Construction, repair, and/or maintenance activities at the school site are restricted by DTSC in accordance with the O&M Plan only when exposures of NOA-containing soils are reasonably anticipated or when releases occur. Notification to DTSC of construction, repairs, and maintenance activities is not required unless NOA soils are expected to be disturbed, or are inadvertently disturbed. "Non-NOA intrusive work" is defined as including construction, repairs, and/or maintenance activities at the school site where exposure of NOA-containing soils is not anticipated and where the integrity of engineered controls, such as hardscaped or landscaped caps, is not compromised. Non-NOA-intrusive work includes work where the geotextile/marker, if present, will not be penetrated or breached, even though work may be performed in upper layers of a cap system, e.g., clean fill. School district policies require the following procedures be taken when conducting non-NOA intrusive work at the school site:

- NOA Coordinator will provide information regarding location of cap systems and soils containing NOA to selected contractors and O&M personnel to minimize likelihood of NOA intrusion
- O&M Professional and/or O&M personnel will conduct inspections during construction and/or maintenance activities at the school site to ensure NOA-containing soils are not being disturbed
- In the event that NOA-containing soils are inadvertently disturbed, the integrity of engineered controls is compromised, or a geotextile/marker is breached, the NOA Coordinator will be responsible for notifying DTSC and implementing the appropriate procedures in accordance with the provisions described in Section 7.2.

7.2 NOA Intrusive Work

Instructions: Describe the procedures to be followed by the school district when performing NOA intrusive construction, repair or maintenance activities to: a) ensure that safeguards are in place to prevent or minimize NOA exposures to anyone at the school site; b) prevent untrained or unauthorized personnel from performing intrusive work in NOA areas; and c) restore the integrity of engineering controls (cap systems) in place if impaired or compromised by such activities. Specify that NOA intrusive work should be overseen by the NOA Coordinator and conducted in accordance with a Standard Operating Procedure (SOP), approved by DTSC. Specify requirement to prepare a Completion Report summarizing all NOA intrusive work; incorporate Completion Reports into Annual Inspection Summary Report for submittal to DTSC.

The following procedures are required by the school district when performing NOA intrusive construction, repair or maintenance activities to: a) ensure that safeguards are in place to prevent or minimize NOA exposures to anyone at the school site; b) prevent untrained or unauthorized personnel from performing intrusive work in NOA areas; and c) restore the integrity of engineering controls (cap systems) in place if impaired or compromised by such activities. These procedures will be overseen by the NOA Coordinator for all NOA intrusive work (as defined in Section 7.0 of this O&M Plan) performed by, or on behalf of, the school district at the school site:

- provide information regarding location of cap systems, cross-section construction details, and locations of all soils containing NOA to selected contractors
- verify that selected contractors and their employees will comply with federal and state OSHA requirements (see Appendix E)
- require school district employees to follow established site-specific health and safety requirements (see Section 7.4) before starting NOA intrusive work
- require that construction and maintenance work be performed under and in accordance with a DTSC-approved SOP (see Appendix G)
- evaluate timelines, school and work schedules to ensure that NOA intrusive work is completed as soon as possible to minimize exposure risks
- require reasonable restrictions to school site access to reduce exposures to non-workers
- implement dust control practices that utilize water
- manage any NOA-containing or impacted soils brought to the surface in accordance with the soil management plan (see Appendix H) and in compliance with applicable, relevant and appropriate provisions of state and federal law
- comply with all applicable, relevant and appropriate federal, state, and local requirements, such as the California Air Resources Board (CARB) Final Regulation Order, Section 93105,

Asbestos Airborne Toxics Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations ; also Section 93106, *Asbestos Airborne Toxic Control Measure for Surfacing Applications*

7.3 Standard Operating Procedure (SOP)

Instructions: Require NOA intrusive work to be addressed in accordance with a DTSC-approved Standard Operating Procedure (SOP). Identify procedures to be followed during any construction and/or maintenance work that could disturb NOA containing soils. Describe the contents of the SOP. Refer to Appendix G, Standard Operating Procedure (SOP).

Whenever possible, NOA intrusive construction or maintenance work activities will be conducted in accordance with the DTSC-approved SOP (see Appendix G). Except in unplanned situations, advance notification to DTSC will be submitted in accordance with requirements found in Section 8.5.

The SOP identifies procedures to be followed for NOA-intrusive work, including:

- stabilization of site
- limitation on site access as appropriate
- NOA exposure monitoring of workers
- required notification to DTSC
- management of excavated soils including dust control and soil segregation
- decontamination procedures for excavation equipment and workers
- geo-textile/marker, cap repair, or fill replacement procedures including temporary measures
- evaluation and use of new fill materials

If site conditions are not adequately addressed in the pre-approved SOP, modification or revision of the SOP may be required. For example, the SOP does not include provisions for conducting air monitoring at fencelines, or use of a meteorological air station. When such air monitoring is required pursuant to CalOSHA or other regulatory requirements, such as CARB's ATCMs (see Section 7.4), a modified or new SOP detailing such procedures will be submitted in advance for DTSC's review.

7.4 Health and Safety Requirements

Instructions: Identify requirement for a "Competent Person" who will conduct exposure assessment for NOA intrusive activities at the school site. Specify required and recommended health and safety standards to be met during school site construction and maintenance or O&M activities to prevent exposures to NOA. Reference the requirement to follow all procedures identified in the SOP (see Table of Contents for Model SOP in Appendix G), as well as preparation of a site-specific, standard Health and Safety Plan with regard to use of personal protective equipment, work practices to minimize exposure to dust, precautions when working around heavy equipment, prevention of heat exhaustion, etc.

The school district will designate a Competent Person (§ 1529[b]) to conduct an exposure assessment at the initiation of any construction operation (§ 1529[f][2][A]) to ascertain where airborne asbestos fibers may exceed the PELs (§ 1529[c]) during that operation. A "Competent

Person" is one who:

- is capable of identifying existing and predictable conditions in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees
- is also capable of identifying existing asbestos hazards in the workplace, and selecting the appropriate control strategy for asbestos exposure
- has authority to take prompt corrective measures to eliminate such identified hazards

The Competent Person may be an asbestos consultant, safety officer or technician familiar with sampling techniques and potentially asbestiform mineral formations; the Competent Person may utilize the assistance of the O&M Professional or other trained professionals as appropriate. All personnel performing the O&M activities specified in the O&M Plan will be responsible for operating in compliance with the most current requirements of:

- Title 8, California Code of Regulations, §5192 (8 CCR 5192), General Industry and Construction Safety Orders
- Title 8, California Code of Regulations, § 1529 (8 CCR 1529), Asbestos, Construction Safety Orders
- Title 29, Code of Federal Regulations, §1910.120 (29 CFR 1910.120), "Standards for Hazardous Waste Operations and Emergency Response (HAZWOPER)"
- Title 29, Code of Federal Regulations, § 1926 (29 CFR 1926), Construction Industry Standards
- Title 40, Code of Federal Regulations, § 763, Subpart E (40 CFR 763), Asbestos Containing Materials in Schools
- California Air Resources Board's (CARB) Section 93105 – *"Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations"* and CARB Section 93106 – *"Asbestos Airborne Toxic Control Measure for Surfacing Applications"* as applicable
- Other pertinent requirements (e.g., local ordinances, etc.)

Site-specific health and safety requirements will be identified for the school site under the supervision of a certified industrial hygienist in accordance with current health and safety standards as specified by the federal and California OSHA agencies. These requirements will be addressed in a Health and Safety Plan (HASP) that identifies proposed NOA intrusive work activities, and specifies site characteristics, current conditions, history, physical and chemical hazards, and methods of handling and controlling NOA so as to prevent or minimize exposures.

All personnel who perform NOA intrusive work at the site must follow these requirements. Contractors doing fieldwork in association with this O&M Plan will either adopt and abide by these site-specific requirements or develop their own health and safety plans, which, at a minimum, meet the site-specific requirements. A copy of a "Plan Acceptance Form" will be included in the HASP; all onsite personnel will read the requirements and sign the "Plan Acceptance Form" before starting the specified NOA intrusive work.

8.0 REPORTING AND RECORDKEEPING

8.1 DTSC Reporting Requirements

Instructions: Provide a listing of all reports and records to be maintained at the school site and at the school district, and all reports and records to be submitted for DTSC review and approval. Identify responsible school district staff member who will review records and submit reports to DTSC.

The NOA Coordinator will maintain records of training provided to O&M personnel, compile appropriate information, develop, and timely submit the following reports to regulatory agencies:

- annual inspection summary reports
- completion reports for NOA intrusive work
- Five Year Review reports

8.2 Annual Inspection Summary Reports

Instructions: Specify that Annual Inspection Summary Reports should summarize reports from periodic inspections during the preceeding twelve months, and may also include recommendations regarding changes to maintenance procedures, inspection frequency, etc. based on evaluation of effectiveness of cap systems. Submit Annual Inspection Summary Reports within 60 days after each annual O&M inspection for DTSC's review and approval. Specify that each annual report should be signed by the O&M Professional and the NOA Coordinator. Refer to Appendix J, Outline for Annual Inspection Summary Reports.

Annual Inspection Summary Reports will summarize reports from periodic inspections, and will document completions, delays, or failures to repair any items identified as needing repairs. The Annual Inspection Summary Report will be signed by the O&M Professional and NOA Coordinator, and will be submitted by the NOA Coordinator for DTSC's review and approval no later than 60 calendar days after the annual inspection has been conducted. Annual Inspection Summary Reports will follow the format outlined in Appendix J, and will be included and maintained in files at the school site and at the school district.

Annual Inspection Summary Reports will include the following:

- copies and a summary of the signed periodic inspection checklists completed since preparation of the previous annual inspection summary report

- results of the annual visual inspection, measurements and an evaluation of the conditions and amounts of cap materials remaining over the geo-textile/NOA soil, and if necessary, analytical sampling data and analyses

- description of actions taken since completion of the previous O&M annual inspection, including:
    - any repairs to the installed cap remedy that were identified and carried out
    - any significant changes in site conditions or usage, e.g., paving, grading, utility

trenching, playgrounds, or picnic areas
    - any additional onsite construction or other significant information that may relate to the installed cap remedy or impact their function, e.g., installation of portable buildings or maintenance facilities

- copies of work orders and Completion Reports for any NOA intrusive work (see Section 7 of the O&M Plan) including emergencies, since the previous O&M annual inspection

- description of any maintenance or repairs identified as needed during the O&M annual inspection

- description of recommendations for O&M Plan modifications

- description of actions planned or expected to be undertaken before the next O&M annual inspection that will impact the engineering controls (caps) in place

- recommendations concerning any repairs to the installed caps that are still needed

- photographs depicting site conditions with brief identifying captions or descriptions ("View looking east across the capped soccer field"). During the annual inspection, the O&M Professional will take photographs for documentation as appropriate to demonstrate stability and/or failure of engineering controls.

- conclusions regarding the ongoing effectiveness of the cap systems

- documentation of additional NOA investigation, monitoring and/or mitigation activities required by DTSC

8.3 Completion Report for NOA-Intrusive Work

Within 60 days of completion, NOA intrusive work activities will be documented in a Completion Report, prepared by the O&M Professional to summarize the NOA-intrusive work that has been done, and include the following information:

- date work performed
- work location, with maps and figures
- work activities performed, including restoration of cap systems where necessary
- work practices taken to prevent potential exposures
- variance or modifications (if any) of the approved SOP
- summary of finished site conditions

The O&M Professional will incorporate all Completion Reports for NOA intrusive work conducted during the year into the Annual Inspection Summary Report. The format for Completion Reports will follow the outline in Appendix I.

8.4 Five-Year Review Reports

Identify due dates for the Five-Year Reviews. Specify that the Five-Year Review will be a stand-alone document including a summary of site history and current conditions. Note that DTSC will review and approve each Five-Year Review report. Refer to Appendix J Outline, noting requirements to complete technical assessment of ongoing remedy effectiveness. Specify that Five-Year Reviews should be submitted within 60 days after completion of each fifth year inspection.

The first Five-Year Review report for the school site will be completed five years from the date when DTSC issued site certification. All subsequent five-year review reports will be completed by the [month and day] of every fifth year. The NOA Coordinator will submit the Five-Year Review report to DTSC for review and approval within 60 days after completion of each scheduled Five-Year Inspection. Five-Year Review reports will be maintained in files at the school site and school district, in accordance with Section 8.6 of the O&M Plan.

The Five-Year Review report will follow the format in Appendix J to summarize remedy effectiveness in the five-year period. The Report will identify any incidents or problems with the cap systems, and will evaluate system and component performance, effectiveness, and protectiveness. The Five-Year Review report will state conclusions and make recommendations for any changes needed to maintain remedy protectiveness. Five-Year Review reports will include the following components: Introduction; Site Background; Physical Setting; Site Chronology; Removal Actions; Five-Year Review Process; Technical Assessment; Issues; Conclusions; Recommendations and Cost Impacts. The "Technical Assessment" component will include a summary of the previous four annual reports and the information identified in the annual O&M inspection.

In addition to the information required in the Annual Inspection Summary Reports (see Section 8.2), the Five-Year Review Report will include a Technical Assessment and evaluation of the ongoing protectiveness of the remedy during the Five-year review. This evaluation will address the following questions:

- Is the remedy functioning as intended at the school site by the remedy selection decision documents?
- Are the removal action objectives, goals, and criteria used at the time of the remedy selection still valid?
- Have there been any significant changes in the distribution or concentration of the subsurface NOA at the school site?
- Has any other information come to light that could call into question the protectiveness of the remedy?
- Are any modifications needed to make the O&M Plan more effective?

8.5 Notification and Reporting of NOA Intrusive Work

Instructions: No notification to DTSC is required if duration of NOA intrusive activities is anticipated to be less than seven calendar days. Specify that NOA Coordinator is responsible to notify DTSC in advance of all NOA intrusive field activities that will exceed seven calendar days duration. Require advance written notice and reporting to DTSC for NOA intrusive activities exceeding seven calendar days, and/or when a modified or new SOP will be utilized. Indicate

that electronic notification via e-mail to the designated DTSC project manager and supervisor will be considered acceptable notice. Describe required content of e-mail notice, to include information concerning planned activities, identification of work area, projected start and end dates, and use of the pre-approved (or modified or new) SOP (see Appendix G).

Activities that disturb NOA containing soils are restricted by DTSC in accordance with the approved O&M Plan. The NOA Coordinator will submit notice to DTSC in writing in advance of any NOA-intrusive activity that is anticipated to exceed seven days in duration from start to completion whenever NOA intrusive work will be conducted at the school site, that is, where cap systems or geotextiles/markers may be breached or otherwise compromised during the course of construction, repair, or maintenance activities. All NOA intrusive work activities will be conducted in accordance with a DTSC-approved SOP (see Appendix G); advance notification to DTSC is required if the pre-approved SOP is modified or substantially rewritten.

8.5.1 Notification Timeframes

- Notification to DTSC is *not* required for the following activities at the Site:
    - The activities are non-NOA work (whether or not intrusive) that are not anticipated to disturb NOA containing soils
    - The projected NOA intrusive work duration is less than seven days from start to completion, and will follow the SOP
- Notification to DTSC by the NOA Coordinator *is required* for the following activities:
    - Notify DTSC 14 days in advance if the activities are for NOA intrusive work, are anticipated to exceed seven days in duration from start to completion, and will follow the SOP
    - Notify DTSC at least 14 days in advance if the activities are for NOA intrusive work, and will follow a modified SOP. DTSC"s approval of the modified SOP will be obtained prior to implementation of work.
    - Notify DTSC at least 30 days in advance if the activities are for NOA intrusive work, and will follow a new SOP. DTSC's approval of the new SOP will be obtained prior to implementation of work.
    - Notify DTSC of unplanned events (e.g., broken sewer line) if not repaired within 14 days; submit a Completion Report within 60 days after completion of work.

8.5.2 Electronic Mail Notice Format

Written communication to DTSC may be submitted via e-mail. A sample e-mail notification to DTSC project manager and unit supervisor might read as follows:

"The [name of school district] plans to perform maintenance at the [name and address of the school site] soccer field (see attached *pdf* figure showing the location) to repair one broken sprinkler head and add one new sprinkler head. As noted on the figure, the area has a geotextile/marker and a cap of six inches of clean fill over NOA-containing soils. We need to cut through the existing marker and remove approximately [two] cubic yards of NOA-containing soils during the activity. The action is proposed for [start date] and will be completed on [end date]. The marker will be restored by [brief description of restoration plan.] We will follow the SOP

Workplan provided in the [name and date of O&M Plan approved by DTSC]. If you have any questions or would like to visit during the activity, please contact [name and address of NOA Coordinator and/or O&M Professional and contact telephone numbers]..."

TABLE 3

Notice and Reporting Requirements for NOA Intrusive Work

Activity Onsite	NOA Intrusive Work		Unplanned Events	Annual/ 5 Year Inspection
	Duration ≤7 calendar days	Duration >7 calendar days		
1. Notify DTSC	Not Required	Yes – before work begins	If not repaired within 14 days after discovery	Yes - 14 days before inspection
1.a) Using SOP Workplan		14 days before work begins		
1.b) Using Modified SOP Workplan	14 days before work begins, regardless of duration.			
1.c) Using New SOP Workplan	30 days before work begins, regardless of duration.			
2. Reports	Document in Annual Report	Completion Report in Annual Report	Completion Report to DTSC wi/ 60 days and in Annual Report	Annual/5-Year Report submitted to DTSC wi/ 60 days of inspection

8.6 Record Keeping and Retention

Instructions: Specify record-keeping and retention requirements; indicate that NOA Coordinator is responsible for maintenance of all O&M records. Identify location of copies of all O&M records, location of DTSC's Administrative Record. Describe availability of records for public review and DTSC inspection,.

All documentation records (e.g., data, reports, and other documents) prepared under the O&M Plan will be maintained by the NOA Coordinator at the school site and in the school district administrative offices. The records will be available for inspection upon request by the public and DTSC representatives. The records will include, but are not limited to:

- Periodic inspection checklists; annual inspection summary reports; five-year review reports; Completion Reports for NOA-intrusive work; photographs associated with all of the above
- Records of training for Asbestos Awareness and NOA inspections

- All NOA training sessions will be logged and recorded for the administrative record, and documented in the Annual Inspection Summary Report submitted to DTSC
- At a minimum, the log will identify the name of the company providing the training, instructor's name and title and qualifications, names and signatures of staff persons attending training, with staff job title, and date(s) of training

- Records of personal air monitoring and perimeter air sampling for asbestos concentrations during construction and maintenance work activities
- Records of public inquiries for information about NOA at the school site
- Investigation and Mitigation Documents, e.g., PEA, RAW, Removal Action Completion Report, O&M Agreement and Plan for school, including surveys, photographs, design specifications and as-built drawings, and appendices

All records will be preserved by NOA Coordinator for a minimum of 7 years after the conclusion of each relevant activity. The NOA Coordinator will notify DTSC in writing at least six (6) months prior to destroying any documents prepared pursuant to the O&M Plan. If requested by DTSC, the NOA Coordinator will make requested documents available for review or copy.

Because of the potential volume of paper that could be generated or stored, the NOA Coordinator may elect to maintain paper copies of the previous 12 months reports and the latest five-year report, if applicable, and keep the rest as electronic files (e.g., in *pdf* format). DTSC's Administrative Record for the school site is available for public inspection during office hours at the following DTSC location:

Department of Toxic Substances Control
[Address]
Attention: [Name of DTSC Project Manager]

9.0 SITE ACCESS

Instructions: Identify requirement for DTSC access to the school site.

Upon request, access to the school site will be arranged and provided by the NOA Coordinator at all reasonable times to DTSC representatives or O&M personnel.

10.0 VARIANCE, MODIFICATION AND TERMINATION OF O&M PLAN

Instructions: Describe provisions for variance, modification, and termination of O&M Plan; explain requirement for DTSC review and approval of requests for variance, modification, and termination.

The NOA Coordinator may seek variance, modification, and/or termination of the O&M Plan at any time during the life cycle of the cap remedy. "Variance" refers to possible release from specific individual O&M Plan requirements for a limited time period, while "modification" refers to permanent revision of specific individual O&M Plan requirements. DTSC may allow variance, modification or termination of the O&M Plan if DTSC determines that:

- such variance, modification or termination is protective of public health and safety and the environment

- it is neither feasible nor appropriate to continue the O&M Plan as a component of the remedy selected for the school site.

10.1 O&M Plan Variance

The NOA Coordinator may apply to DTSC for a written variance from the provisions of the O&M Plan. DTSC will evaluate each request, and will grant a variance request only after determining that such a request would be protective of human health and the environment.

10.2 O&M Plan Modifications

When long-term performance of the selected cap remedies has been confirmed, the NOA Coordinator may apply to DTSC to modify the requirements of the O&M Plan based on site-specific monitoring results and conditions. Additionally, DTSC reserves the right to independently initiate appropriate O&M Plan modifications. As a result, DTSC may require the following O&M Plan modifications:

- changes in the frequency of O&M activities
- modification, replacement, or addition of components to the O&M Plan if O&M activities fail to achieve the O&M objectives of protecting public health, safety and the environment
- evaluation, design, construction, and/or operation of additional remedial measures to achieve the O&M objectives

10.3 Termination of O&M Plan

Based on review of a Five-Year Review Report or a subsequent Annual Inspection Summary Report, DTSC may determine if the cap remedy has met either of the following performance criteria required for termination of O&M activities:

- availability of new scientific information resulting in changes or modifications to DTSC's technical criteria for evaluating unacceptable risk levels of NOA concentrations in soils
- change in land use, where the school site is no longer used as an educational facility

As required by H&SC §25359.7, prior to the sale, lease or sublease of the school site, or any portion thereof, the NOA Coordinator will provide the buyer, lessee, or sub-lessee with notice that NOA-containing soils are located on or beneath the school site,.

DTSC will notify the NOA Coordinator in writing when continued O&M activities for the cap remedies are no longer required. Because caps are not anticipated to have any adverse impacts on building foundation systems or other components, removal and/or decommissioning of the caps following termination of the O&M activities will not be required by DTSC.

11.0 REFERENCES

Instructions: List citations or document references for most current regulatory and site-specific requirements; note that this list may be amended as appropriate.

- California Air Resources Board, California Code of Regulations §93105, Air Toxics Control Measure
- California Air Resources Board, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (Construction/Quarrying ATCM) and the Asbestos Airborne Toxic Control Measure for Surfacing Applications
- Department of Toxic Substances Control, Interim Guidance Naturally Occurring Asbestos (NOA) at School Sites, Revised 9/24/04
- [Insert site-specific reference to School District's Removal Action Workplan (RAW) for the school site, identifying preparer and date]
- Other citations or references as appropriate

12.0 FIGURES, TABLES AND APPENDICES

Instructions: List and attach appropriate figures, tables, and appendices as noted in Table of Contents; note that this list may be amended as appropriate.

APPENDIX A

LEGAL DESCRIPTION OF ASSESSOR'S PARCEL MAP

APPENDIX B

MATRIX - O&M PERSONNEL ROLES AND RESPONSIBILITIES

	NOA Coordinator	Engineering Geologist	School Principal	Maintenance Staff
1. Training				
Coordinate training and refresher requirements for district administrators, faculty and maintenance personnel				
Track and schedule training and refresher requirements for district staff				
Coordinate NOA awareness training for designated contractors working at site				
2. Inspections, Maintenance, and Repairs				
Direct monthly/annual/5-year inspections of engineered controls and completion of the inspection checklists in compliance with O&M Plan				
Monitor onsite maintenance activities for compliance with dust mitigation and air monitoring requirements				
Direct and oversee maintenance activities involving disturbance of NOA-containing soils to ensure that SOP is followed				
Direct and oversee implementation of contingency plan in compliance with O&M Plan; obtain DTSC approval of workplan when required				
Notify district staff and parents regarding the O&M Plan; respond to questions				
Perform Inspections, maintenance and repairs.				

3. Record Keeping and Checklists				
Maintain records of all O&M-related activities				
Document activities that will potentially disturb NOA-containing soils				
Maintain and conduct monthly review of site files of maintenance reports				
Complete and submit maintenance reports and records for agency review				
Document provision of NOA awareness training for designated contractors and staff				
Complete Inspection checklist and file checklist				
4. Reporting				
Coordinate reporting to regulatory agencies				
Notify regulatory agencies of planned activities that disturb NOA-containing soils but conducted pursuant to SOP				
Notify regulatory agencies of planned or unplanned activities conducted in accordance with a workplan approved by DTSC				
Develop, complete and submit periodic/annual/5-year reports				

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APPENDIX C

RESUME OF OPERATION AND MAINTENANCE PROFESSIONAL

APPENDIX D

AS-BUILT DRAWINGS AND SPECIFICATIONS

APPENDIX E
TRAINING REQUIREMENTS

40 CODE OF FEDERAL REGULATIONS FOR ASBESTOS-CONTAINING MATERIALS (ACM)

TITLE 8 CALIFORNIA CODE OF REGULATIONS FOR ASBESTOS IN CONSTRUCTION

Note: As of June 2005, there are no federal or state health and safety training requirements regarding work related to NOA. The requirements cited below apply to work with Asbestos Containing Materials (ACM) and Potentially Asbestos Containing Materials (PACM), and will be used as guidelines for "best available management practices" when determining the level of training required for school district maintenance staff.

Class I Asbestos Work

In accordance with 8 CCR, §1529 (b) and (k)(9)(E), "Class I asbestos work" means activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM. Training for Class I operations and for Class II operations that require the use of critical barriers (or equivalent isolation methods) and/or negative pressure enclosures under this section shall be the equivalent in curriculum training method and length to the EPA Model Accreditation Plan (MAP) asbestos abatement workers training (40 CFR Part 763, Subpart E, Appendix C).

Class II Asbestos Work

In accordance with 8 CCR, §1529 (b) and (k)(9)(E), "Class II asbestos work" means activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Training for other Class II work.

1. For work with asbestos containing material involving roofing materials, flooring materials, siding materials, ceiling tiles, or transite panels, training shall include at a minimum all the elements included in subsection (k)(9)(H) of this section and in addition, the specific work practices and engineering controls set forth in subsection (g) of this section which specifically relate to that category. Such course shall include "hands-on" training and shall take at least 8 hours.

2. An employee who works with more than one of the categories of material specified in subsection (k)(9)(D)1. of this section shall receive training in the work practices applicable to each category of material that the employee removes and each removal method that the employee uses.

TRAINING REQUIREMENTS

3. For Class II operations not involving the categories of material specified in subsection (k)(9)(D)1. of this section, training shall be provided which shall include at a minimum all the elements included in subsection (k)(9)(H) of this section and in addition, the specific work practices and engineering controls set forth in subsection (g) of this section which specifically relate to the category of material being removed, and shall include "hands-on" training in the work practices applicable to each category of material that the employee removes and each removal method that the employee uses.

Class III Asbestos Work

In accordance with 40 CFR §763.92 (a)(1) and 8 CCR §1529 (k)(9)(E), "Class III asbestos work" means repair and maintenance operations, where asbestos-containing materials are likely to be disturbed. Training for Class III employees shall be consistent with United States Environmental Protection Agency (US-EPA) requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(2). Such a course shall also include "hands-on" training and shall take at least 16 hours.

Exception: For Class III operations for which the competent person determines that the US-EPA curriculum does not adequately cover the training needed to perform that activity, training shall include as a minimum all the elements included in subsection (k)(9)(H) of this section and in addition, the specific work practices and engineering controls set forth in subsection (g) of this section which specifically relate to that activity, and shall include "hands-on" training in the work practices applicable to each category of material that the employee disturbs.

Class IV Asbestos Work

In accordance with 40 CFR § 763.92 (a)(1) and 8 CCR §1529 (k)(9)(F), "Class IV asbestos work" means maintenance and custodial activities during which employees contact but do not disturb ACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Training for employees performing Class IV operations shall be consistent with US-EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR § 763.92(a)(1). Such a course shall include available information concerning the locations of thermal system insulation and surfacing ACM/PACM, and asbestos-containing flooring material, or flooring material where the absence of asbestos has not yet been certified; and instruction in recognition of damage, deterioration, and decontamination of asbestos-containing building materials. Such course shall take at least 2 hours.

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TRAINING REQUIREMENTS

Other Training

In accordance with 8 CCR §1529 (k)(9)(G), training for employees who are likely to be exposed in excess of the Permissive Exposure Limit (PEL) and who are not otherwise required to be trained under subsections (k)(9)(C) through (F) of this section, shall meet the requirements of subsection (k)(9)(H) of this section.

(H) The training program shall be conducted in a manner that the employee is able to understand. In addition to the content required by provisions in subsections (k)(9)(C) through (F) of this section, the employer shall ensure that each such employee is informed of the following:

1. Methods of recognizing asbestos, including the requirement in subsection (k)(1) of this section to presume that certain building materials contain asbestos;

2. The health effects associated with asbestos exposure;

3. The relationship between smoking and asbestos in producing lung cancer;

4. The nature of operations that could result in exposure to asbestos, the importance of necessary protective controls to minimize exposure including, as applicable, engineering controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures, and waste disposal procedures, and any necessary instruction in the use of these controls and procedures where Class III and IV work will be or is performed, the contents of EPA 20T-2003, "Managing Asbestos In-Place" July 1990 or its equivalent in content;

5. The purpose, proper use, fitting instructions, and limitations of respirators as required by Section 5144;

6. The appropriate work practices for performing the asbestos job;

7. Medical surveillance program requirements;

8. The content of this standard including appendices;

9. The names, addresses and phone numbers of public health organizations which provide information, materials and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations contained in Appendix I to this section, to comply with this requirement; and

TRAINING REQUIREMENTS

10. The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

Access to Training Materials

(A) The employer shall make readily available to affected employees without cost, written materials relating to the employee training program, including a copy of this regulation.

(B) The employer shall provide to the Chief and the Director, upon request, all information and training materials relating to the employee information and training program.

(C) The employer shall inform all employees concerning the availability of self-help smoking cessation program material. Upon employee request, the employer shall distribute such material, consisting of NIH Publication No. 89-1647, or equivalent self-help material, which is approved or published

APPENDIX F

INSPECTION CHECKLIST FOR NOA CAP REMEDIES

Date		**Inspector Name/Signature**	
Inspection Frequency		**Supervisor Name/Signature**	

	Area	Surface Condition OK?	Maintenance Required	Recommended Action Schedule		
				Plan	Implement	Completion
Hardscape Systems	Area A (Asphalt parking lot)	Yes ☐ No ☐	Yes ☐ No ☐			
	Area B (Concrete walkway)	Yes ☐ No ☐	Yes ☐ No ☐			
	Area C (Artificial turf)	Yes ☐ No ☐	Yes ☐ No ☐			
	Area D (Rubberized track)	Yes ☐ No ☐	Yes ☐ No ☐			
Natural Cover Systems	Landscape Area E	Yes ☐ No ☐	Yes ☐ No ☐			
	Landscape Area F	Yes ☐ No ☐	Yes ☐ No ☐			
	Landscape Area G	Yes ☐ No ☐	Yes ☐ No ☐			
	Landscape Area H	Yes ☐ No ☐	Yes ☐ No ☐			
	Landscape Area I	Yes ☐ No ☐	Yes ☐ No ☐			

1. All areas are shown on Figure 3, Map of Areas with Cap Systems
2. Inspection for the hardscape systems should ensure that concrete/asphalt pad and artificial materials cover have not been disturbed or damaged in any way.
3. Inspection for the landscape cover systems should ensure that vegetation on the surface remains healthy, that there are no bare soil areas are without vegetation; and that fencing is intact.

APPENDIX G

STANDARD OPERATING PROCEDURE (SOP) FOR NOA INTRUSIVE WORK AT [SCHOOL NAME] SITE[a]

5.2.2 Utility Survey and Clearance
5.2.3 NOA Control
5.2.4 Permits and Plan
5.3 Field Work
5.3.1 Confined Space Entry Requirements
5.3.2 Excavation
5.3.3 Soil Staging and Storage Operations
5.3.4 Waste Segregation Operations
5.3.5 Repair or Maintenance
5.4 Transportation Plan for Offsite Disposal
5.5.1 Waste Soil Loading
5.5.2 Dust Control during Transportation
5.5.3 Traffic Control
5.5.4 Transportation Routes
5.5.5 Offsite Disposal
5.5.6 Shipment Documentation
5.5 Decontamination
5.6.1 Work Area
5.6.2 Decontamination of Workers
5.6.3 Decontamination of Equipment or Truck
5.6 Backfill, Compaction and Site Restoration
5.7 Work Completion Inspection

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a. Any changes to the SOP for a NOA intrusive project, must be approved by DTSC (Section 7.3 and Table 3) and documented in the Completion Report (Section 8.3).

APPENDIX H

NOA INSPECTION SUMMARY REPORT OUTLINE

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Appendices

APPENDIX I

NOA INTRUSIVE WORK COMPLETION REPORT OUTLINE

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APPENDIX J

NOA FIVE YEAR REVIEW REPORT OUTLINE

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Appendices